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Source: Combined Source Set 10 - Utility, Design and Plant Patents
Terms: patno=5812226 (Edit Search | Suggest Terms for My Search)

868481 (08) 5812226 September 22, 1998

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT

5812226

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September 22, 1998

Liquid crystal display formed by a plurality of non-electrically interconnected liquid crystal display panels

REISSUE: September 21, 2000 - Reissue Application filed Ex. Gp.: 2871; Re. S.N. 09/667,427 (O.G. November 7, 2000)

INVENTOR: Izumi, Yoshihiro - Kashihara, Japan (JP); Fujiwara, Sayuri - Nara, Japan (JP); Shinomiya, Tokihiko - Nara, Japan (JP)

APPL-NO: 868481 (08)

FILED-DATE: June 3, 1997

GRANTED-DATE: September 22, 1998

PRIORITY: September 2, 1994 - 6210216, Japan (JP); February 17, 1995 - 7029395, Japan (JP)

ASSIGNEE-AT-ISSUE: Sharp Kabushiki Kaisha, Osaka, Japan (JP), Foreign company or corporation (03)

LEGAL-REP: Conlin, David G.; Michaelis, Brian L.

PUB-TYPE: September 22, 1998 - Utility Patent having no previously published pre-grant publication (A)

PUB-COUNTRY: United States (US)

REL-DATA:

Continuation of Ser. No. 468649, June 6, 1995, ABANDONED

US-MAIN-CL: 349#73

CL: 349

Query/Command: prt ful legalall max

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FAN - 20042780485744

PN - 🖪 US5812226 A 19980922 [US5812226]

STG: United States patent

AP: 1997US-0868481 19970603

FD: Cont. of US468649 19950606 [1995US-0468649] (Abandoned)

TI - Liquid crystal display formed by a plurality of non-electrically interconnected

liquid crystal display panels

PA - SHARP KK

PA0 - Sharp Kabushiki Kaisha, Osaka [JP]

IN - FUJIWARA SAYURI; IZUMI YOSHIHIRO; SHINOMIYA TOKIHIKO

PR - 1994JP-0210216 19940902; 1995JP-0029395 19950217; 1995US-0468649

19950606; 1997US-0868481 19970603

IC - G02F-001/13

G02F-001/133

G02F-001/1333

ICAA - G02F-001/1333 [2006-01 A - I R M EP]

ICCA - G02F-001/13 [2006 C - I R M EP]

EC - G02F-001/1333N

PCL - ORIGINAL (O): 349073000

CT - (US5812226)

US440836; US4515440; US4591240; US4733948; US4906071; US5106197; US5164853; JP1-213621; JP5-19347; JP5-19346; JP5-127605; JP5-188340; JP5-341310; JP6-95130; JP6-17178

AB - (US5812226)

A liquid crystal display comprising a plurality of liquid crystal panels placed on a single plane of a large substrate, and a black matrix made of a photo-absorbing film that shows black when having absorbed light. Two polarizing plates are respectively placed to cover the front and rear surface of a set of liquid crystal panels almost entirely in such a manner that their polarizing axes intersect at right angles. The resulting multi-screen liquid crystal display consumes less power, retains excellent display quality, and makes the joints between the liquid crystal panels difficult to see.

OBJ - (US5812226)

The present invention relates to a liquid crystal display used for AV (audiovisual) systems or OA (office automation) systems.

ADB - (US5812226)

It is desirable that the liquid crystal display further includes a first photoblocking film in matrix which covers the circumference of the pixel electrode of each liquid crystal panel in a predetermined trace width.

Also, it is desirable that the liquid crystal display further includes a second photo-blocking film which covers the liquid crystal display panels on an end surface of the connected part side along the longitudinal direction in a predetermined trace width.

In this case, it is desirable that the first photo-blocking film is made of a photo-

absorbing film that shows black when having absorbed light.

The resulting multi-screen liquid crystal display consumes less power, retains excellent display quality, and makes the joints between the liquid crystal panels difficult to see.

Thus, it is necessary to make the joints between the display screens difficult to see to display a natural large-sized image.

Herein, a plurality of display images projected onto the screen 135 are connected on the same, thereby realizing a large-screen liquid crystal display of a rear project type that makes the joints difficult to see.

ICLM - (US5812226)

1. A liquid crystal display comprising:

a plurality of interconnected liquid crystal panels connected to each other adjacently on a single surface, each liquid crystal panel including a respective pixel electrode to form a liquid crystal display main body;

a first polarizing element provided on substantially an entire front surface of said liquid crystal display main body, said first polarizing element having a first polarizing axis; and

a second polarizing element provided on substantially an entire rear surface of said liquid crystal display main body, said second polarizing element having a second polarizing axis, said first and second polarizing axes intersecting at right angles wherein lack of electrical interconnection between said plurality of liquid crystal panels facilitates minimizing spacing therebetween and configuration of said first polarizing element and said second polarizing element renders any spacing less noticeable;

said display further including a photo blocking film disposed perpendicular to said display and configured to substantially block diagonal incident light.

UP - 2000-08

1/1 LGST - ©EPO

PN - 🔁 US5812226 A 19980922 [US5812226]

AP - US86848197 19970603 [1997US-0868481]

ACT - 20001107 US/RF-A

REISSUE APPLICATION FILED EFFECTIVE DATE: 20000921

UP - 2003-22

1/1 CRXX - @CLAIMS/RRX

AN - 3044522

PN - 🔀 5,812,226 A 19980922 [US5812226]

PA - Sharp K K JP PT - E (Electrical)

ACT - 20000921 REISSUE REQUESTED

Issue Date of O.G.: 20001107

Reissue Request Number: 09/667427

Examination Group responsible for Reissue process: 2871

UP - 2000-45

UACT - 2000-11-07

Search statement 2

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Extended Family Search Results

5812226/PN Results: 4

PATENT FAMILY

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<u>4)</u>	US5812226	Α	19980922	1997US-0868481	19970603
	Priority:			•	
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	1995JP-0029395		19950217		·
	1995US-0468649		19950606		
	1997US-0868481		19970603		
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PN - CN1120178 A 19960410 [CN1120178]

STG - (A) Unexamined application

TI - (A) Liquid crystal display

PA - (A) SHARP KK (JP)

IN - (A) FUJIWARA SAYURI (JP); IZUMI YOSHIHIRO (JP); SHINOMIYA TOKIHIKO (JP)

IC - (A) G02F-001/1336

PN2 - CN1087437 C 20020710 [CN1087437C]

STG2 - (C) Granted patent

TI2 - (C) Liquid crystal display

PA2 - (C) SHARP KK (JP)

IN2 - (C) FUJIWARA SAYURI (JP); IZUMI YOSHIHIRO (JP); SHINOMIYA TOKIHIKO (JP)

IC2 - (C) G02F-001/1335

AP - CN95108323 19950606 [1995CN-0108323]

PR - JP21021694 19940902 [1994JP-0210216] JP2939595 19950217 [1995JP-0029395]

ICAA - G02F-001/133 [2006-01 A - I R M EP]; G02F-001/1335 [2006-01 A - I R M EP]; G02F-001/1339 [2006-01 A - I R M EP]; G02F-001/1347 [2006-01 A - I R M EP]

ICCA - G02F-001/13 [2006 C - I R M EP]

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⊕ ☐ TITLE 42. THE PUBLIC HEALTH AND WELFARE

⊕ ☐ TITLE 43. PUBLIC LANDS

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